

# INTERNATIONAL SEARCH REPORT

Int. Application No.  
PCT/GB 03/05035

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C317/44 C07C323/52 C07C323/54 C07C323/62 C07D333/60  
A61K31/10 A61P25/28 A61P35/00 A61P37/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	G.X. MA, ET AL.: "The synthesis of dienecarbamates as adapt prodrug models" SYNTHETIC COMMUNICATIONS, vol. 24, no. 14, 1997, pages 2445-2454, XP0008028581 MARCEL DEKKER, NEW YORK, NY, US compound 9 and its precursor ethyl ester	1-3,8, 12,13, 15,19, 21,22
X	GB 2 101 600 A (MONTEDISON) 19 January 1983 (1983-01-19)  compounds 12,13; claim 1	1-3,8, 12,13, 15,19, 21,22
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

15 March 2004

Date of mailing of the International search report

29/03/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Q.B. CASS, ET AL.: "On the preparation and rearrangement of some vinylic sulphoxides" JOURNAL OF THE CHEMICAL SOCIETY, PERKIN TRANSACTIONS 1, no. 11, November 1991 (1991-11), pages 2683-2686, XP002273305 ROYAL SOCIETY OF CHEMISTRY, LETCHWORTH, GB compound 16	1-3,8, 12-14, 16,19
X	T.A. GOURDIE, ET AL.: "DNA-directed alkylating agents. 1. Structure-activity relationships for acridine-linked aniline mustards: consequences of varying the reactivity of the mustard" JOURNAL OF MEDICINAL CHEMISTRY, vol. 33, no. 4, April 1990 (1990-04), pages 1177-1186, XP002273306 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compound 25c	1,2,8, 13,19
X	I. FLEMMING, ET AL.: "gamma-Sulphenylation of alpha,beta-unsaturated aldehydes, ketones, and esters: the use of O-silylated dienolates" TETRAHEDRON LETTERS, no. 34, 1979, pages 3205-3208, XP002273307 ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL page 3206, products of 6th to 8th entries	1-3,8, 12,13,15
X	G. CAI, ET AL.: "CD exciton chirality method. New red-shifted chromophores for hydroxyl groups" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 115, no. 16, 11 August 1993 (1993-08-11), pages 7192-7198, XP0000673163 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compounds 13a,b	1-3,6,8, 13,26
X	A.G.M.BARRETT, ET AL.: "Total synthesis of (+)-milbemycin beta3" JOURNAL OF ORGANIC CHEMISTRY, vol. 51, no. 25, 12 December 1986 (1986-12-12), pages 4840-4856, XP002273308 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compound 35a	1-3, 11-13

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R.A. BUNCE, ET AL.: "Functionalised carbocycles by tandem dealkoxycarbonylation-Michael addition reactions" JOURNAL OF ORGANIC CHEMISTRY, vol. 58, no. 25, 3 December 1993 (1993-12-03), pages 7143-7148; XP002273309 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compound 34c	1-3, 9, 12-14
X	US 4 013 776 A (V. LAFON) 22 March 1977 (1977-03-22) examples 12,13,15	1,2,13, 14
X	DATABASE CHEMABS CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; XP002273313 Database accession no. 1969:37237 CAPLUS abstract & JP 43 012331 B (MITSUBISHI RAYON) 24 May 1968 (1968-05-24)	1,2
X	A.S. KALGUTKAR, ET AL.: "Covalent modification of cyclooxygenase-2 (COX-2) by 2-acetoxyphenyl alkyl sulphides, a new class of selective COX-2 inactivators" JOURNAL OF MEDICINAL CHEMISTRY, vol. 41, no. 24, 19 November 1998 (1998-11-19), pages 4800-4818, XP002273310 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compounds 58,59; table 3	1,29-31
X	M. COWART, ET AL.: "Nitroaromatic amino acids as inhibitors of neuronal nitric oxide synthase" JOURNAL OF MEDICINAL CHEMISTRY, vol. 41, no. 14, 2 July 1998 (1998-07-02), pages 2636-2642, XP002273311 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC US compounds 21,22, table 4	1,29-31

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	G. DANNHARDT, ET AL.: "2-Aryl-pyrrolo[2,1-b]benzothiazole als selektive oder duale Inhibitoren der Cyclooxygenase und 5-Lipoxygenase" DIE PHARMAZIE, vol. 52, no. 6, June 1997 (1997-06), pages 428-436, XP002273312 GOVI VERLAG PHARMAZEUTUSCHER VERLAG, ESCHBORN, DE compounds 13a, 13a'	1-3, 6, 13, 29-31
Y	M. YOSHIDA, ET AL.: "Potent and specific inhibition of mammalian histone deacetylase both in vivo and in vitro by trichostatin A" JOURNAL OF BIOLOGICAL CHEMISTRY., vol. 265, no. 28, 5 October 1990 (1990-10-05), pages 17174-17179, XP000616087 AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US ISSN: 0021-9258 the whole document	32, 33
Y	US 2002/103192 A1 (M.L. CURTIN, ET AL.) 1 August 2002 (2002-08-01) examples 106-109	32, 33

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### Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 31,32 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 1-3,8-18,29-31 (in part)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box I.1

Although claims 31,32 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

## Continuation of Box I.2

Claims Nos.: 1-3,8-18,29-31 (in part)

The initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which part(s) of the claim(s) may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT).

For these reasons it appears impossible to execute a meaningful search and /or to issue a complete search report over the whole breadth of the claim(s). The search and the report for those claims can only be considered complete for the compounds of claims 4-7,18-20 and the examples relating to compounds of claim 1 as well as the the use of compounds of claims 1,20 for the inhibition of histone deacetylase and the treatment of the diseases listed in claim 33.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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Information on patent family members

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